

## **Notice of Proposed Action**

### **Charybdis 3D Seismic Survey Phase 2**

USDA Forest Service  
Medicine Bow-Routt National Forests and Thunder Basin National Grassland  
Douglas Ranger District  
Converse County, WY

#### **PURPOSE AND NEED**

The purpose of the survey is to acquire geophysical data in support of oil and gas mineral development within the project area. The proponent, Devon Energy Production Company, L.P. (Devon), intends to collect seismic data to achieve the following goals with the proposed project:

- Map the geologic structure of the Niobrara, Sussex, Teapot, Mowry, and Minnelusa formations;
- Detect fractures in the formations which could contain economic quantities of fluid hydrocarbons; and
- Determine locations for drilling future oil and gas wells to reduce the potential for developing unproductive wells and constructing infrastructure, such as roads, well pads, or pipelines, associated with non-productive wells.

The project is needed in order obtain geophysical data that could better inform fluid hydrocarbon minerals development plans in the vicinity.

#### **PROPOSED ACTION**

The USDA Forest Service received a Notice of Intent and Plan of Operations from the proponent to conduct oil and gas geophysical exploration on National Forest System lands of the Thunder Basin National Grassland (TBNG). The Charybdis 3D (three-dimensional) Seismic Survey Phase 2 encompasses a total area of approximately 187 square miles (119,752 acres) across both private and public lands. Within that area, approximately 18.92 square miles (12,111.45 acres) are located on the TBNG in Townships 37 and 38 North by Ranges 67, 68, and 69 West, in Converse County, Wyoming.

The proposed Phase 2 project is a continuation of the Charybdis 3D Seismic Survey that was completed in December 2019. The intended date to begin the geophysical survey activities on the TBNG is August 15, 2020. Once the geophysical survey recording begins (approximately September 1, 2020), it will take approximately 30 days to survey the area within the TBNG. The duration of the entire project is estimated to be 50 days. The geophysical survey operations will generally move from south to north through the project.

Land surveyors would be employed to recommend the source energy and receiver locations and designated travel routes for conducting the geophysical survey. All travel

routes as well as areas of avoidance for the survey would then be determined by the Forest Service before the geophysical survey operations begin.

Receiver lines would be aligned in an east-west direction and spaced approximately 880 feet apart. Along these lines, receiver points would be spaced approximately 220 feet apart. A helicopter would be used to transport geophones and recording equipment along the seismic lines. The equipment would be deployed and operated by ground crews.

Source lines would be aligned in a north-south direction and spaced approximately 1,100 feet apart. Source points, at which either vibroseis buggies or shot-holes (drilled into the ground and explosive charges used), would be used to generate source energy. Source points would be spaced approximately 220 feet apart along the source lines. The buggies would be equipped with smooth floatation tires to minimize effects on soil and vegetation. Shot-hole drilling equipment would be transported by helicopter (see Photo 1) across terrain that is too steep for operation of vibroseis buggies or in areas where the buggies may not be used for other reasons. All drilling supplies are located on the rig and once on location the operator will drill a 50-foot depth hole and load it with 5.5 pounds of explosives (see Photo 2). Shot-hole locations would not be determined until resource inventories and land surveys are completed.

Devon submitted a supplemental plan for operations located along the north side of the project, occurring within both the Cow Creek and Downs Inventoried Roadless Areas (IRAs). Only heli-portable shot-hole source energy generation would occur and no vibroseis buggies would be used in order to minimize the surface disturbance in these roadless areas. Ground crews would travel on foot to deploy and maintain the geophones and receiver equipment. No off-road motorized vehicle travel would occur in these areas. However, National Forest System roads that are open to motorized vehicles in the Cow Creek IRA would be used for logistical support by ground crews. The Forest Service Region 2 Planning Office has reviewed and concurred with the pre-scoping roadless project evaluation that was submitted for the proposed project.

## **AFFECTED ENVIRONMENT**

The project area is located approximately 40 miles northeast of Douglas in Converse County, Wyoming. Road access to the project area include Converse County Roads 38 (Dull Center Road), 43 (Walker Creek Road) and 45 (Cow Creek Road), as well as National Forest System roads on the Thunder Basin NG.

Topography generally ranges from fairly level grassland plains with slopes of less than 15% to rolling hills and steep escarpments within the northern and eastern portion of the project area. The land surface elevation ranges between 4,500 to 5,300 feet above sea level. The primary drainages in the project area include Rat Creek, Dry Creek, and Lightning Creek. The dominant vegetation includes big sagebrush, western wheatgrass, needlegrass, and blue gramma. Sagebrush and grassland community wildlife species such as black-tailed prairie dog, mule deer, pronghorn antelope, mountain plover, sage grouse, and raptors inhabit the area.

## **LAND AND RESOURCE MANAGEMENT PLAN DIRECTION**

This project responds to the goals outlined in the Land and Resource Management Plan for the Thunder Basin National Grassland; goals for this activity include:

### **Goal 2 – Multiple Benefits to People**

Provide a variety of uses, values, products, and services for present and future generations by managing within the capability of sustainable ecosystems.

- 2c: Improve the capability of the Nation's forests and grasslands to provide a desired sustainable level of uses, values, products and services.

Mineral and Energy Resources – Objectives:

1. Ensure reclamation provisions of operating plans are completed to standard.
2. Honor all valid existing legal mineral rights.

### **Geographic Area Direction**

The project is located primarily in the Broken Hills Geographic Area (LRMP p. 2-2). Primitive conditions with open, scenic landscape and little evidence of human influence or activity is emphasized in this geographic area.

The western portion of the project lies within the Hilight Bill Geographic Area (LRMP p. 2-21). Minerals exploration and development and livestock grazing are significant management activities in this geographic area.

### **Management Area Direction**

The primary Management Prescription for the project area is 3.65 – Rangelands with Diverse Natural-Appearing Landscapes. Management emphasizes maintaining or restoring a diversity of desired plants and animals and ecological processes and functions while providing for a mix of other rangeland values and uses, with limits on facilities to support livestock grazing.

## **ENVIRONMENTAL EFFECTS ANALYSIS**

The Forest Service Responsible Official, with an interdisciplinary team of resource specialists, will analyze the possible effects or impacts this proposal could have on the biological, cultural, and physical environments in the analysis area and the relationship between the proposal and the laws, regulations, and agency policy that apply to the proposal.

## **DECISIONS TO BE MADE**

Through the environmental analysis process, the Responsible Official of the Forest Service will determine whether or not this proposal will be authorized and, if so, where and under what terms and conditions the proponent would conduct the activity on National Forest System lands.

## **COMMENTS REQUESTED**

The Forest Service seeks comments and input from federal, tribal, state, and local agencies, and individuals or organizations that have an interest in or could be affected by the proposed action. Specific comments are the most useful for the identification of issues and analysis of the proposal.

The name and mailing address of the commenter should be provided with comments so that future documents pertaining to this project may be provided to them. Comments received in response to this solicitation, including names and addresses of those who comment, will be considered part of the public record and will be available for public inspection.

Send written comments to:  
Responsible Official  
USDA Forest Service  
2250 E. Richards St.  
Douglas, WY 82633

Facsimile: 307-358-7107.

E-mail comments may be sent to: [comments-rm-mbr-douglas-thunder-basin@fs.fed.us](mailto:comments-rm-mbr-douglas-thunder-basin@fs.fed.us)

The e-mail system will accept email, rtf, and Microsoft Word formats. If comments are electronically mailed, the sender should receive an automated electronic acknowledgement from the agency as confirmation of receipt. If the sender does not receive such confirmation, it is the sender's responsibility to ensure timely receipt by other means. Comments may be delivered in person to the Douglas Ranger Station between 8:00 a.m. and 4:30 p.m., Monday through Friday, except holidays.

Pursuant to 7 CFR 1.27 (d), any person may request the agency to withhold a submission from the public record by showing how the Freedom of Information Act (FOIA) permits such confidentiality. Persons requesting such confidentiality should be aware that, under the FOIA, confidentiality may be granted in only very limited circumstances, such as to protect trade secrets. The Forest Service will inform the requester of the agency's decision regarding the request for confidentiality, and where the request is denied, the agency will return the submission and notify the requester that the comments may be resubmitted with name and address within 10 days.

## **CONTACT PERSON INFORMATION**

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This public scoping notice and the project map are available on the World Wide Web at: <https://www.fs.usda.gov/project/?project=57566>

Topographic map of the Cow Creek area in Converse, Montana. The map shows a grid of townships (T. 36 N. to T. 38 N.) and ranges (R. 67 W. to R. 70 W.). A blue boundary outlines a specific area, and a yellow boundary outlines another. A green cross-hatched area is labeled 'Cow Creek' and 'Downs'. A north arrow is in the top right corner.



Inventoried Roadless Area

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Proposed Boundary for  
Charybdis 3D Seismic Survey Phase 2

Receiver Points/Lines Only

Thunder Basin National Grassland

BLM Land

State Land

Revised by J. McKay 2/03/2020



Photo 1 – Heli-portable drill transport



Photo 2 – Heli-portable drill rig in operation



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(1) mail:

U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights,  
1400 Independence Avenue SW, Washington D.C. 20250-9410;

(2) fax: (202) 690-7442; or

(3) email: [program.intake@usda.gov](mailto:program.intake@usda.gov)

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